

What is claimed is:

- 1 1. A resistive element, comprising:  
2 a first contact point connected to a capacitor terminal;  
3 a second contact point connected to a circuit board plane; and  
4 a resistive material connected to the first and second contact points.
- 1 2. The resistive element of claim 1, wherein the first contact point is connected  
2 to the capacitor terminal using solder, and wherein the second contact point is  
3 connected to the circuit board plane using at least one via.
- 1 3. The resistive element of claim 1, wherein the resistive material includes a  
2 first metal.
- 1 4. The resistive element of claim 3, wherein the first metal is nickel.
- 1 5. The resistive element of claim 3, wherein the resistive material includes a  
2 second metal.
- 1 6. The resistive element of claim 5, wherein the second metal is gold.
- 1 7. The resistive element of claim 6, wherein the first and second metals have a  
2 width of about 10 to about 1000 microns, a length of about 10 to about 5000  
3 microns, and a total thickness of about 0.05 to about 2.5 microns.
- 1 8. The resistive element of claim 1, wherein the resistive material includes a  
2 conductive epoxy.
- 1 9. The resistive element of claim 1, wherein the resistive material includes a  
2 resistive component selected from a group consisting of: a metal, a conductive metal  
3 oxide, a glass, a solvent, a polymer, nickel, chromium, tantalum, oxynitride, silicon

4 monoxide, cobalt, alumina, sapphire, quartz, berillium, palladium, carbon, platinum,  
5 ruthenium, rhodium, and gold.

1 10. The resistive element of claim 1, wherein the second contact point is  
2 connected to the circuit board plane using a plurality of vias.

1 11. The resistive element of claim 1, wherein a summed series resistance  
2 provided by adding a value of resistance for the resistive element to an effective  
3 series resistance of the capacitor is approximately equal to an effective series  
4 resistance of a circuit board capacitor and a circuit board plane connected to the  
5 circuit board capacitor.

1 12. A circuit board, comprising:  
2 a capacitor having a terminal;  
3 a power supply plane; and  
4 a resistive element including a first contact point connected to the terminal  
5 of the capacitor, a second contact point connected to the power supply plane, and  
6 a resistive material connected to the first and second contact points.

1 13. The circuit board of claim 12, wherein the first contact point is connected to  
2 the terminal of the capacitor using solder, and wherein the second contact point is  
3 connected to the power supply plane using at least one via.

1 14. The circuit board of claim 13, wherein the resistive material includes a first  
2 metal and a second metal.

1 15. The circuit board of claim 14, wherein the first metal is nickel and the  
2 second metal is gold.

1 16. The circuit board of claim 12, wherein the resistive material is selected from  
2 a group consisting of: a metal, a conductive metal oxide, a glass, a solvent, a

3 polymer, nickel, chromium, tantalum, oxynitride, silicon monoxide, cobalt, alumina,  
4 sapphire, quartz, berillium, palladium, carbon, platinum, ruthenium, rhodium, and  
5 gold.

1 17. The circuit board of claim 12, wherein a summed series resistance provided  
2 by adding a value of resistance for the resistive element to an effective series  
3 resistance of the capacitor is approximately equal to an effective series resistance of  
4 a circuit board capacitor and an effective series resistance of the power supply plane  
5 connected to the circuit board capacitor.

1 18. A circuit package, comprising:  
2 a circuit element;  
3 a first terminal connected to the circuit element; and  
4 a second terminal connected the circuit element and to a first contact point of  
5 a resistive element including a second contact point for connection to a power  
6 supply plane.

1 19. The circuit package of claim 18, wherein the circuit element is a capacitor.

1 20. The circuit package of claim 18, wherein the circuit element includes at least  
2 one transistor.

1 21. The circuit package of claim 18, wherein the circuit package has an outside  
2 surface to which the resistive element is attached.

1 22. The circuit package of claim 18, wherein a summed series resistance  
2 provided by adding a value of resistance for the resistive element to an effective  
3 series resistance of the circuit element is approximately equal to an effective series  
4 resistance of a circuit board capacitor connected to the power supply plane added to  
5 an effective series resistance of the power supply plane.

1 23. A method fabricating a circuit board, comprising:  
 2 selecting an amount of equivalent series resistance for a resistive element  
 3 including a first contact point and a second contact point;  
 4 selecting a type of material for the resistive element;  
 5 fabricating at least one layer of the circuit board having a pad and a via for  
 6 connection to a power plane of the circuit board;  
 7 depositing the resistive element on the layer of the circuit board so as to  
 8 connect the first contact point to the pad and to connect the second contact point to  
 9 the via.

1 24. The method of claim 23, wherein depositing the resistive element on the  
 2 layer of the circuit board so as to connect the first contact point to the pad and to  
 3 connect the second contact point to the via further comprises:  
 4 screening the resistive element onto the layer of the circuit board.

1 25. The method of claim 23, wherein depositing the resistive element on the  
 2 layer of the circuit board so as to connect the first contact point to the pad and to  
 3 connect the second contact point to the via further comprises:  
 4 plating the resistive element onto the layer of the circuit board.

1 26. The method of claim 23, wherein selecting an amount of equivalent series  
 2 resistance for a resistive element further comprises:  
 3 selecting a value of resistance for the resistive element such that a summed  
 4 series resistance provided by adding the value of resistance for the resistive element  
 5 to an effective series resistance of a first capacitor is approximately equal to an  
 6 effective series resistance of a second capacitor attached to the circuit board added  
 7 to an effective series resistance of the power plane.